VECTORS

of change in European Marine Ecosystems and their Environmental and Socio-Economic Impacts



Human use	_	Multiple pressures	_	Impacts
Species outbreaks	_	Invasive alien species	_	Changes in productivity
Understanding	_	Management	_	Stakeholders
EU Maritime Policy	_	IMO Convention	_	EU Marine Strategy

VECTORS is an EU funded research project investigating the increasing and diversifying human use of the European marine environment and how this is leading to new and challenging changes for marine life and society.

VECTORS will examine how these changes may affect the range of goods and services provided by the oceans, the ensuing socio-economic impacts and some of the measures that could be developed to reduce or adapt to these changes.







Results so far...

VECTORS has reviewed the current understanding of drivers, pressures and vectors of change that are affecting ecosystems in the North, Baltic and western Mediterranean Seas, and has completed an overview of the current international and European law relating to these seas. By interviewing stakeholders at the regional and EU level VECTORS has sought to understand the barriers and drivers for successful European marine environmental resources management. These reviews have helped to establish the context for the next phase of VECTORS research.

Considerable effort has been devoted to increase understanding of the mechanisms that lead to outbreaks (such as jellyfish blooms), invasive alien species and changes in fish distribution and productivity. A repository of genetic material has been set up to help identification of invasive alien and outbreak forming species and a database of these species around EU ports has been produced to support ballast water management decisions.

Models are being used to investigate relationships between species distributions, growth, survival and environmental conditions (e.g. temperature or currents) as well as to analyse key drivers of fishers' behaviour, such as competition for fish, economic and spatial constraints, maritime traffic and management. Cross-sector modelling frameworks are being used to project the future changes and consequences of human activity in the marine environment under possible future scenarios.

Who's involved?

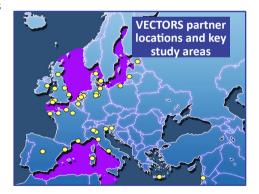
VECTORS brings together more than 200 scientists from 38 institutes across 16 countries in Europe to conduct its research as well as nine independent industry and policy experts and six senior scientific experts to provide guidance on aspects of VECTORS research, its integration across disciplines and the applicability of results.

Why are you receiving this?

You have been identified as someone who may be interested in VECTORS research and results and we would like to keep you informed of our progress. We promise not to bombard you with correspondence but would like to send 'update postcards' when we have important results to share. If you'd like to register your interest for specific areas of our research, nominate a colleague to receive updates or remove yourself from our database please email vectors@pml.ac.uk. All details are held confidentially in accordance with the Data Protection Act.

	1st drivers review	DNA bank established		Evidence of impacts of change	Impact on economy Future projections	
2011	2012		2013	2014	2015	
		Policy review	Model simulation	Ecosystem valuation	Regional seas synthesis Summer school reco	Policy ommendations

Name
Address 1
Address 2
Address 3
Address 4
Address 5



Further information

www.marine-vectors.eu

factsheets, publications, reports and newsletters vectors@pml.ac.uk +44 (0)1752 633167

